

WHAT IS CLAIMED IS:

1. In a process for packaging an electronic device  
5 comprising the steps of:

preparing a printed wiring board which has wiring  
copper layers coated with a metal layer comprising a  
metal other than copper;

10 coating the metal layer with an insulating protec-  
tive resin layer, keeping an area for mounting an elec-  
tronic device exposed;

mounting the electronic device on the exposed area  
via an electroconductive material; and

15 coating the mounted electronic device and a portion  
of the insulating protective resin layer with an encapsu-  
lant;

an improvement in which the insulating protective  
resin layer is produced by employing at least one of the  
following resin compositions (1) to (3):

20 (1) a resin composition comprising 100 weight parts  
of an organic solvent-soluble resin having a polysiloxane  
skeleton and a polar group, 0.5 to 30 weight parts of an  
epoxy compound having an epoxy equivalent of more than  
800, and an organic solvent;

25 (2) a resin composition comprising 100 weight parts  
of an organic solvent-soluble resin having a polysiloxane  
skeleton and a polar group, 0.1 to 10 weight parts of an  
epoxy compound having an epoxy equivalent of 100 to 800,  
2 to 30 weight parts of a polyvalent isocyanate compound,  
30 and an organic solvent; and

(3) a resin composition comprising 100 weight parts  
of an organic solvent-soluble resin having a polysiloxane  
skeleton and a polar group, 0.1 to 20 weight parts of an  
epoxy compound having an epoxy equivalent of more than  
35 800, 2 to 30 weight parts of a polyvalent isocyanate com-  
pound, and an organic solvent.

2. The process of claim 1, wherein the metal layer comprises tin.

3. The process of claim 1, wherein the organic solvent-soluble resin is an organic solvent-soluble polyimide-siloxane.

4. The process of claim 3, wherein the organic solvent-soluble polyimide siloxane is produced by a reaction of a tetracarboxylic acid compound with a diamine compound comprising 30 to 95 mol.% of a diaminopoly-siloxane compound, 0.5 to 40 mol.% of an aromatic diamine compound having a polar group on an aromatic ring thereof and 0 to 69.5 mol.% of an diamine compound other than the aromatic diamine compound.

5. The process of claim 1, wherein the resin composition contains a curing catalyst.

6. The process of claim 1, wherein the resin composition contains a filler.

7. The process of claim 1, wherein the resin composition is curable at a temperature of lower than 130°C.

8. A resin composition comprising a combination of 100 weight parts of an organic solvent-soluble resin having a polysiloxane skeleton and a polar group, 0.1 to 10 weight parts of an epoxy compound having an epoxy equivalent of 100 to 800, 2 to 30 weight parts of a polyvalent isocyanate compound, and an organic solvent, or a combination of 100 weight parts of an organic solvent-soluble resin having a polysiloxane skeleton and a polar group, 0.1 to 20 weight parts of an epoxy compound having an epoxy equivalent of more than 800, 2 to 30 weight parts of a polyvalent isocyanate compound, and an organic

solvent.

9. The resin composition of claim 8, wherein the organic solvent-soluble resin is an organic solvent-soluble polyimide-siloxane.

10. The resin composition of claim 9, wherein the organic solvent-soluble polyimide siloxane is produced by a reaction of a tetracarboxylic acid compound with a diamine compound comprising 30 to 95 mol.% of a diamino-polysiloxane compound, 0.5 to 40 mol.% of an aromatic diamine compound having a polar group on an aromatic ring thereof and 0 to 69.5 mol.% of an diamine compound other than the aromatic diamine compound.

11. The resin composition of claim 8, which further contains a curing catalyst.

12. The resin composition of claim 8, which further contains a filler.

13. The resin composition of claim 8, which is curable at a temperature of lower than 130°C.

14. A cured resin material which is produced by curing at least one of the following resin compositions (1) to (3) for producing:

(1) a resin composition comprising 100 weight parts of an organic solvent-soluble resin having a polysiloxane skeleton and a polar group, 0.5 to 30 weight parts of an epoxy compound having an epoxy equivalent of more than 800, and an organic solvent;

(2) a resin composition comprising 100 weight parts of an organic solvent-soluble resin having a polysiloxane skeleton and a polar group, 0.1 to 10 weight parts of an epoxy compound having an epoxy equivalent of 100 to 800,

2 to 30 weight parts of a polyvalent isocyanate compound, and an organic solvent; and

5 (3) a resin composition comprising 100 weight parts of an organic solvent-soluble resin having a polysiloxane skeleton and a polar group, 0.1 to 20 weight parts of an epoxy compound having an epoxy equivalent of more than 800, 2 to 30 weight parts of a polyvalent isocyanate compound, and an organic solvent,

10 and which shows no glass transition temperature of higher than 160°C.

15 15. The cured resin material of claim 14, wherein the organic solvent-soluble resin is an organic solvent-soluble polyimide-siloxane.

20 16. The cured resin material of claim 15, wherein the organic solvent-soluble polyimide siloxane is produced by a reaction of a tetracarboxylic acid compound with a diamine compound comprising 30 to 95 mol.% of a diaminopolysiloxane compound, 0.5 to 40 mol.% of an aromatic diamine compound having a polar group on an aromatic ring thereof and 0 to 69.5 mol.% of an diamine compound other than the aromatic diamine compound.

25 17. The cured resin material of claim 14, which further contains a curing catalyst.

30 18. The cured resin material of claim 14, which further contains a filler.